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(54) Title: IMPROVED PSEUDOTYPED RETROVIRUSES

(57) Abstract: Pseudotyped retroviruses having viral glycoproteins with modified O glycosylation regions are provided. Also provided are methods for making the pseudotyped retroviruses of the present invention and for using the pseudotyped retroviruses for transduction of target cells. Cells for stably producing the pseudotyped retroviruses or the present invention are also provided.





International application No.

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A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : A61K 39/12 US CL : 424/199.1 According to International Patent Classification (IPC) or to both national classification and IPC							
Minimum documentation searched (classification system followed by classification symbols) U.S.: 424/185.1, 199.1, 207.1; 435/320.1; 536/23.4, 23.72							
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched							
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Please See Continuation Sheet							
C. DOCT	JMENTS CONSIDERED TO BE RELEVANT						
Category *	Citation of document, with indication, where ap		Relevant to claim No.				
х	WO 01/83730 A2 (KOBINGER et al.) 08 November	2001 (08.11.2001) see claims.	1, 3-9, 13, 14, 17-25				
<u></u> А			2, 10-12, 15, 16				
<u>x</u>	KOBINGER et al. Filovirus-pseudotyped lentiviral vector can efficiently and stably transduce airway epithelia in vivo. Nature Biotechnology. March 2001, Vol. 19, No. 3,		1, 3-9, 13, 14, 17-25				
A	pages 225-230.		2, 10-12, 15, 16				
Y	WATSON et al. Targeted transduction patterns in the mouse brain by lentivirus vectors pseudotyped with VSV, Ebola, Mokola, LCMV, or MuLV envelope proteins. Molecular		1-9, 13-14, 17-25				
A	Therapy. May 2002, Vol. 5, No. 1, pages 528-537.						
JOHNSON et al. Pseudotyped human lentiviral vector-mediated gene transfer to airway epithelia in vivo. Gene Therapy. April 2000, Vol. 7, No. 7, pages 568-574.		1, 3, 4, 7, 9, 14 2, 8, 13, 17-25					
Further	documents are listed in the continuation of Box C.	See patent family annex.					
	pecial categories of cited documents: t defining the general state of the art which is not considered to	"T" later document published after the in priority date and not in conflict with understand the principle or theory u	the application but cited to				
be of particular relevance: "X" document of particular relevance; the claimed invention cannot considered novel or cannot be considered to involve an invention date "E" document of particular relevance; the claimed invention cannot considered novel or cannot be considered to involve an invention taken alone			dered to involve an inventive				
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention can considered to involve an inventive step when the document of combined with one or more other such documents, such combination being obvious to a person skilled in the art			step when the document is such documents, such				
"O" document referring to an oral disclosure, use, exhibition or other means "&" document member of the same patent family "P" document published prior to the international filing date but later than the			nt family				
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C. (Contin	uation) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category •	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P — Y, P	JEFFERS et al. Covalent modifications of the ebola virus glycoprotein. Journal of Virology. December 2002, Vol. 76, No. 24, pages 12463-12472.	1-3, 5-25
X, P	SINN et al. Lentivirus vectors pseudotyped with filoviral envelope glycoproteins transduce airway epithelia from the apical surface independently of folate receptor alpha. Journal of Virology, May 2003, Vol. 77, No. 10, pages 5902-5910.	1, 3-10, 13, 14, 17- 25
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$\begin{tabular}{ll} \textbf{Continuation of B. FIELDS SEARCHED Item 3:} \\ \end{tabular}$

WEST, DERWENT, STN-BIOSIS, MEDLINE, EMBASE, STIC-Sequence search inventor search, lentivirus, retrovirus, filovirus, Ebola, gene transfer, glycosylation, SEQ ID NO:1

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